STATE OF THE WORKFORCE REPORT XV:

SOUTHWEST ALABAMAWORKS

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SUMMARY

This report analyzes workforce supply and demand issues using available metrics of workforce characteristics for Southwest AlabamaWorks workforce region and presents implications and recommendations.

Southwest AlabamaWorks had a 4.4 percent unemployment rate in March 2021, with 14,437 unemployed workers. An underemployment rate of 21.8 percent for 2020 implies that the region has an available labor pool of 83,199 that includes 68,762 underemployed workers who are looking for better jobs and are willing to commute farther and longer for such jobs.

The regional commuting patterns increased from a net out-commuting of 10,243 people in 2005 to a net out-commuting of 15,462 residents in 2018. In 2020 commute time and distance rose from 2019, implying that congestion worsened in the region as the region reopened after the COVID-19 shutdown. Congestion could pose challenges as the economy recovers from the recent COVID-19 pandemic-led recession. This means continuous maintenance and development of transportation infrastructure and systems is necessary to avoid slowing economic development.

By sector, the top five employers in the region are health care and social assistance, retail trade, accommodation and food services, manufacturing, and educational services. In the first quarter of 2020, these five industries provided 166,090 jobs, 59.4 percent of the regional total. Only one of these leading employers—manufacturing—paid the region's $4,127 monthly average wage or more. Economic development should continue to diversify and strengthen the region's economy by retaining, expanding, and attracting more high-wage providing industries. Workforce development should also focus on preparing workers for these industries.

On average 13,074 jobs were created per quarter from second quarter 2001 to first quarter 2020, and quarterly net job flows averaged 134. Both job creation and net job flows declined significantly in first quarter of 2020 due to the adverse effects of the COVID-19 pandemic. Job creation is the number of new jobs that are created either by new businesses or through expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.

The top five high-demand occupations are Combined Food Preparation and Serving Workers, Including Fast Food; Retail Salespersons; Waiters and Waitresses; Janitors and Cleaners, Except Maids and Housekeeping Cleaners; and Laborers and Freight, Stock, and Material Movers, Hand.

The top five fast-growing occupations are Transportation Inspectors; Occupational Therapy Assistants; Engine and Other Machine Assemblers; Aircraft Structure, Surfaces, Rigging, and Systems Assemblers; and Aircraft Mechanics and Service Technicians.

The top 50 high-earning occupations are mainly in management, health, and engineering fields and pay a minimum mean salary of $89,802 and maximum of $273,173 per year. Eight of the top 10 occupations are health jobs and two are in management.

Of the top 40 high-demand, 20 fast-growing, and 50 high-earning occupations, only one—Nurse Practitioners—belong in all three categories. Three occupations are both high-demand and fast-growing, three are both high-earning and in high-demand, and four are high-earning and fast-growing.

Of the region's 720 occupations, 142 are expected to decline over the 2018 to 2028 period, with the 20 sharpest declining occupations dropping by at least four percent and those with disclosed net change data losing a minimum of 20 jobs each. Education and training for these 20 occupations should slow accordingly.

Skill and education requirements for jobs keep rising. Educational and training requirements of high-demand, fast-growing, and high-earning occupations demonstrate the importance of education in developing the future workforce. In the future, more jobs will require postsecondary education and training at a minimum.

The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs indicates a strong need for training in these skills. For Southwest AlabamaWorks, the pace of training needs to increase for technical, basic (science), and resource management skills, while the scale of training should be raised for basic and social skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skills. Employers should be an integral part of planning for training, as they can help identify future skill needs and any existing gaps.

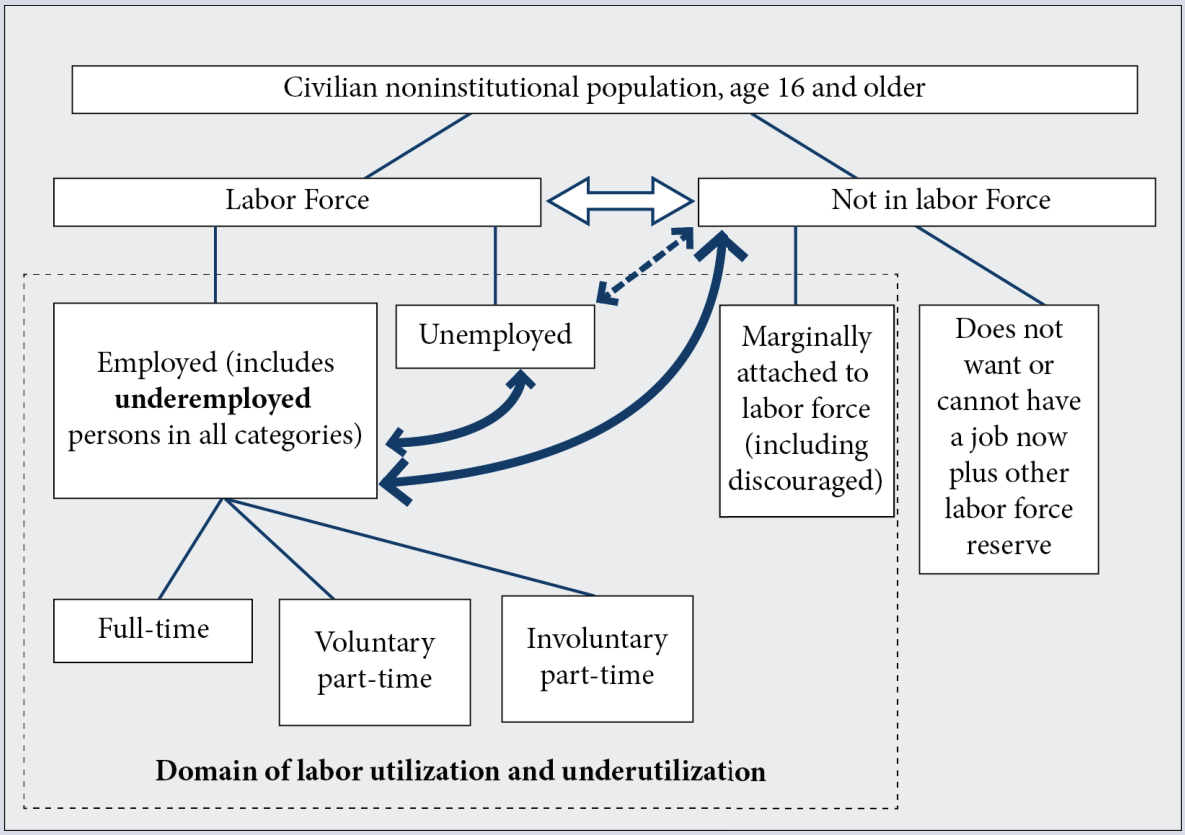
From a 2018 base, worker shortfalls of about 36,500 for 2028 and 44,900 for 2030 are expected. By 2040, worker shortfall will reach 54,800. This will demand a focus on worker skills and shortfalls through 2040. Worker shortfalls for critical occupations will also need to be continuously addressed. Strategies to address skill needs and worker shortfalls might include (1) improving education and its funding; (2) introducing economic opportunities that attract new and younger residents; (3) lowering the high school dropout rate; (4) focusing on hard-to-serve populations (e.g., out-of-school youth); (5) continuing and enhancing programs to assess, retrain, and place dislocated workers; (6) encouraging older worker participation in the labor force; and (7) facilitating in-commuting.

Improving education is important because (i) a highly educated and productive workforce is a critical economic development asset; (ii) productivity rises with education; (iii) educated people are more likely to work; and (iv) it yields high private and social rates of return on investment. Workforce development must view all types of education and other programs (e.g., adult education, career technical training, worker retraining, career readiness, etc.) as one system. Funding to support workforce development may require tax reform at state and local levels and should provide flexibility as workforce needs and priorities change over time. Publicizing both private and public returns to education can encourage individuals to raise their own educational attainment levels, while also promoting public and legislative support for education.

The higher incomes that come with improved educational attainment and work skills will help to increase personal income for the region as well as raise additional local (county and city) tax revenues. This is important, especially for a region that has low labor force growth rates and below average per capita income.

Together, workforce development and economic development can build a strong, well-diversified Southwest AlabamaWorks economy. Indeed, one cannot achieve success in one without the other.

LABOR UTILIZATION AND SUPPLY FLOWS



Source: Addy et al[1] and Canon et al[2]

The chart above presents labor utilization and supply flows that explain labor market dynamics in view of recent study findings. The civilian noninstitutional population age 16 and above is comprised of participants in the labor force and nonparticipants. The labor force is made of employed and unemployed persons; the unemployed do not have a job but are actively searching for work. Employed persons include fully employed and underemployed persons in all categories of work (full-time, voluntary part-time, and involuntary part-time). Nonparticipants in the labor force include retirees (voluntary and involuntary), people who do not want to or cannot work for various reasons (e.g., disability, caring for family members, in school or training, etc.), discouraged workers, and other labor force reserves. It has been suggested that a subgroup of nonparticipants referred to as the "waiting group" is more likely than the rest of the nonparticipants to take a job if wages and conditions are satisfactory, but does not actively search for work. It has been shown that between January 2003 and August 2013, the flow of nonparticipants into employment is 1.6 times that of unemployed persons transitioning into employment, which may be due to the presence of the waiting group.[1, 2] Nonparticipant flows to employment are larger in services, management, and professional occupations while unemployed flows to employment are higher in physically intensive occupations such as construction workers and miners. Industry effects should vary by the type and number of occupations they contain. This finding enhances the common understanding of labor market dynamics and influences workforce availability and skills gap analyses. Skill and spatial mismatches present additional complications to labor market dynamics. For example, unemployment can coexist with significant job availability.

[1]Addy, S.N., Bonnal, M., and Lira, C. (2012). Towards a More Comprehensive Measure of Labor Underutilization: The Alabama Case, *Business Economics,* vol. 47(3) .
[2]Canon, M.E., Kudlyak, M., and Reed, M. (2014). Not Everyone Who Joins the Ranks of the Employed was "Unemployed", *The Regional Economist*, January.

WORKFORCE SUPPLY

Labor Force Activity

The labor force includes all persons in the civilian noninstitutional population age 16 and over, who have a job or are actively looking for one. Typically, those who have no job and are not looking for one are not included (e.g., students, retirees, discouraged workers, and the disabled). Table 7.1 shows labor force information for Southwest AlabamaWorks and its nine counties for 2020 and March 2021. Alabama labor force information is available from the Labor Market Information (LMI) Division of the Alabama Department of Labor. LMI compiles data in cooperation with the U.S. Bureau of Labor Statistics.

The Southwest region's economy enjoyed the longest

Table 7.1 Southwest AlabamaWorks Labor Force Information

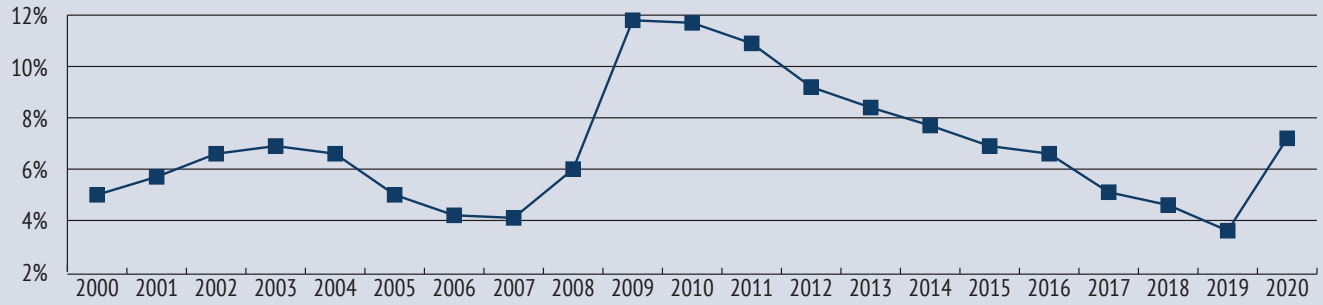
	2020 Annual Average			
	Labor Force	Employed	Unemployed	Rate (%)
Baldwin	96,763	91,338	5,425	5.6
Choctaw	4,621	4,313	308	6.7
Clarke	7,769	7,069	700	9.0
Conecuh	4,529	4,198	331	7.3
Escambia	14,453	13,589	864	6.0
Mobile	190,882	175,761	15,121	7.9
Monroe	7,474	6,864	610	8.2
Washington	6,729	6,190	539	8.0
Wilcox	2,871	2,448	423	14.7
Southwest	336,091	311,770	24,321	7.2
Alabama	2,230,118	2,099,062	131,056	5.9
U.S.	160,742,000	147,795,000	12,947,000	8.1

	March 2021			
	Labor Force	Employed	Unemployed	Rate (%)
Baldwin	96,447	93,539	2,908	3.0
Choctaw	4,663	4,462	201	4.3
Clarke	7,677	7,209	468	6.1
Conecuh	4,420	4,213	207	4.7
Escambia	14,092	13,519	573	4.1
Mobile	186,411	177,385	9,026	4.8
Monroe	7,438	6,993	445	6.0
Washington	6,459	6,149	310	4.8
Wilcox	2,688	2,389	299	11.1
Southwest	330,295	315,858	14,437	4.4
Alabama	2,213,954	2,138,166	75,788	3.4
U.S.	160,397,000	150,493,000	9,905,000	6.2

Note: Not seasonally adjusted.
Source: Alabama Department of Labor and U.S. Bureau of Labor Statistics.

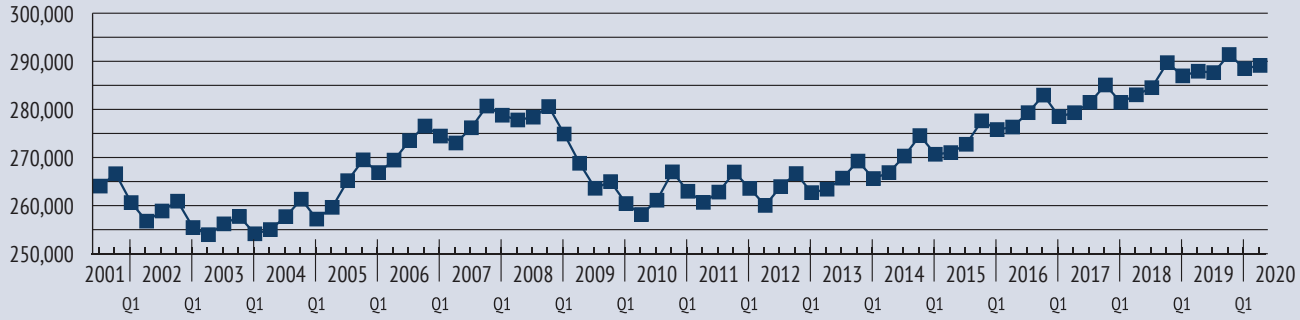
economic recovery and expansion in decades since the 2008 economic recession. By 2019, county unemployment had declined to record levels. However, with the onset of the COVID-19 pandemic and associated economic recession in the first quarter of 2020, economic activities and the workplace were disrupted which lead to a rise in unemployment. As personal protection equipment and testing became more available and Congress provided relief through the CARES Act, businesses and employers resumed operations, albeit, at a staggered pace. This lowered unemployment significantly towards the end of 2020. Annual county unemployment ranged between 5.6 percent to 14.7 percent for 2020 (7.2 percent for the region). The regional unemployment rate was above the statewide rate of 5.9 percent and only Baldwin County had an unemployment rate below the statewide rate. A faster

Figure 7.1 Southwest AlabamaWorks Unemployment Rate



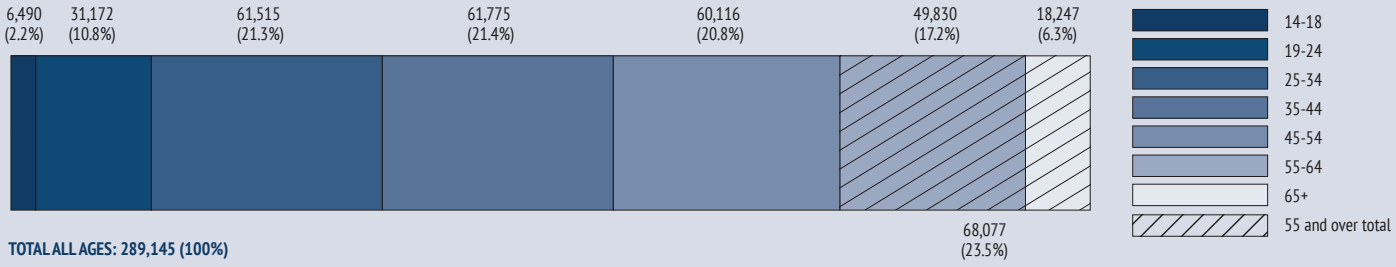
Source: Alabama Department of Labor.

Figure 7.2 Southwest AlabamaWorks Nonagricultural Employment



Source: Alabama Department of Labor and U.S. Census Bureau.

Figure 7.3 Nonagricultural Employment - Workers by Age Group (First Quarter 2020)



Source: U.S. Census Bureau, Local Employment Dynamics Program.
Note: Rounding errors may be present. Nonagricultural employment is by place of work, not residence.

economic recovery continued in the region recovery due to the availability of COVID-19 vaccines and more economic relief through the Consolidated Appropriations Act, 2021 and American Rescue Plan Act, 2021. By the end of March 2021, county unemployment rates declined significantly and ranged from 3.0 percent to 11.1 percent, with 4.4 percent for the region. The unemployment rates were lowest in Baldwin County and highest in Wilcox. Only Baldwin County had an unemployment rate below Alabama's 3.4 percent.

Annual unemployment rates from 2000 to 2020 are shown in Figure 7.1. The region's unemployment rate was low before the 2001 and 2007 recessions. Employment gains resulting from successful state and local economic development efforts brought unemployment down significantly in 2006 and 2007. The 2007 recession raised unemployment to double-digit rates in 2009 through 2011 and a slow recovery kept the rates above pre-2007 recession levels until 2019 when they dropped to a record low of 3.6 percent. However, the regional unemployment rose to 7.2 percent in 2020 due to massive job losses caused by the COVID-19 pandemic-led recession. Unemployment rate has been falling at a slower rate in 2021 as COVID-19 persistence and supply chain backlogs and interruptions continue to limit business operations and the labor supply. The persistence of the pandemic and structural changes in the region's economy will remain a challenge over the next few years. The region's economy is more dependent on tourism and therefore a full economic recovery will depend on effective infection control measures and supportive public policies to reassure visitors and businesses.

Quarterly nonagricultural employment of the region's residents averaged 270,309 from the second quarter of 2001 to the first quarter of 2020 (Figure 7.2). The region's employment is highly seasonal due to the nature of tourism-related activities, which form a major sector along the Gulf Coast. The number of jobs declined steadily from the fourth quarter of 2008 to first quarter of 2010 due to the 2007 economic recession, but gradually increased surpassing the pre-recession levels in the third quarter of 2016. In the third quarter of 2019, total employment reached 291,415, the highest in record, before declining slightly through the subsequent quarters to 289,144 in the first quarter of 2020.

Figure 7.3 shows worker distribution by age in Southwest AlabamaWorks for the first quarter of 2020. The region's workforce is older than that of Alabama. Older workers, age 55 and over, are 23.5 percent of the region's nonagricultural employment versus the state's 22.8 percent. Those who are age 65 and over constitute 6.3 percent of the region's workforce, which is above Alabama's 6.0 percent. Labor force participation of younger residents must increase to meet long term occupational projections for growth and replacement, or older workers may have to work longer.

Commuting Patterns

The number of workers who commute out of Southwest AlabamaWorks exceeds the number commuting into the region (Table 7.2). In 2005, net out-commuting was 10,243 but rose to 19,478 in 2013 before dropping to 15,462 in 2018 due to a significant drop in commuter in- and out-flows. Mobile County had the largest number of in- and out-commuters in the region, followed by Baldwin. About 16,700 workers in the Southwest AlabamaWorks region commute from out-of-state, with 7,400 coming from Florida and 6,200 coming from Mississippi. Many of these are from the Pensacola-Ferry Pass-Brent metropolitan area in Florida (6,500 workers) and Gulfport-Biloxi-Pascagoula metropolitan area in Mississippi (3,600 workers). Over 24,300 of the region's residents commute out-of-state for work of which about 9,600 travel to Mississippi and 8,700 go to Florida.

Table 7.2 also shows that average commute times and distances rose for workers in 2020 from 2019. This implies that congestion worsened as the region re-opened after the COVID-19 pandemic-led shutdown. Congestion is likely to be an issue as the regional economy recovers from the recent recession, particularly in the Mobile and Daphne-Fairhope-Foley metropolitan areas. Thus, regional transportation infrastructure and systems must be maintained and developed to ensure that the flow of goods and movement of workers are not interrupted. Slowing the movement of goods and workers can slow economic development.

Table 7.2 Southwest AlabamaWorks Commuting Patterns

Year	Inflow	Outflow
2005	24,139	34,382
2006	24,415	38,388
2007	29,181	43,257
2008	33,237	44,236
2009	32,346	47,649
2010	33,351	50,926
2011	33,614	51,545
2012	32,588	50,934
2013	34,061	53,539
2014	36,042	54,648
2015	34,599	49,137
2016	36,496	50,527
2017	38,860	53,171
2018	39,499	54,961

Southwest Counties	Inflow, 2018		Outflow, 2018	
	Number	Percent	Number	Percent
Baldwin	24,273	27.2	35,623	34.0
Choctaw	1,773	2.0	2,253	2.2
Clarke	3,484	3.9	5,496	5.2
Conecuh	1,811	2.0	3,324	3.2
Escambia	5,479	6.1	6,955	6.6
Mobile	46,580	52.2	40,196	38.4
Monroe	2,839	3.2	4,443	4.2
Washington	1,761	2.0	4,229	4.0
Wilcox	1,242	1.4	2,185	2.1

	Percent of Workers					
Average commute time (one-way)	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Less than 20 minutes	48.5	48.6	48.7	50.5	49.5	46.2
20 to 40 minutes	27.0	29.8	27.1	28.5	25.1	25.4
40 minutes to an hour	10.4	8.0	9.8	8.1	9.9	11.2
More than an hour	4.3	4.8	5.6	2.7	4.2	4.8
Average commute distance (one-way)	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Less than 10 miles	41.4	42.0	38.7	43.4	44.7	41.7
10 to 25 miles	32.6	35.9	31.6	32.3	31.3	30.2
25 to 45 miles	13.6	13.0	16.6	13.9	13.2	14.7
More than 45 miles	7.7	6.7	9.5	7.8	8.9	10.1

Note: Rounding errors may be present.
Source: U.S. Census Bureau; Alabama Department of Labor; and Center for Business and Economic Research, The University of Alabama.

Population

From 2000 to 2010, the population in Southwest AlabamaWorks grew from 692,180 to 738,815, a 6.7 percent increase (Table 7.3). This growth was less than the state's 7.5 percent. Baldwin County experienced the region's largest population growth, while Choctaw saw the largest population decline. The 2020 decennial census results show that from 2010 to 2020, the Southwest AlabamaWorks region's population grew by 5.1 percent, the same as the state's growth. However, the population growth was almost exclusive in Baldwin County (27.2 percent), as the only other county (Mobile) that gained population had a paltry 0.4 percent growth. All the other counties lost population within the same period. The fastest population decline occurred in Monroe County, followed by Conecuh and Clarke.

Table 7.5 shows Southwest AlabamaWorks' population decennial counts, estimates, and projections by age group. The population aged 65 and over has been growing rapidly since 2010 when the first of the baby boom generation turned 65. Consequently, growth of the prime working age group (20-64) and youth (0-19) will soon lag that of the total population. Indeed, from a 2018 base, the prime working population will decline through 2030. This poses a challenge for workforce development. If employment growth outpaces labor force growth in the long term, communities that experience rapid job gains may need to consider investments in amenities and infrastructure to attract new residents.

Table 7.3 Southwest AlabamaWorks Population

					Change 2000-2010		Change 2010-2020	
County	1990 Census	2000 Census	2010 Census	2020 Census	Number	Percent	Number	Percent
Baldwin	98,280	140,415	182,265	231,767	41,850	29.8	49,502	27.2
Choctaw	16,018	15,922	13,859	12,665	-2,063	-13.0	-1,194	-8.6
Clarke	27,240	27,867	25,833	23,087	-2,034	-7.3	-2,746	-10.6
Conecuh	14,054	14,089	13,228	11,597	-861	-6.1	-1,631	-12.3
Escambia	35,518	38,440	38,319	36,757	-121	-0.3	-1,562	-4.1
Mobile	378,643	399,843	412,992	414,809	13,149	3.3	1,817	0.4
Monroe	23,968	24,324	23,068	19,772	-1,256	-5.2	-3,296	-14.3
Washington	16,694	18,097	17,581	15,388	-516	-2.9	-777	-4.4
Wilcox	13,568	13,183	11,670	10,600	-1,513	-11.5	-1,070	-9.2
Southwest	623,983	692,180	738,815	776,442	46,635	6.7	37,627	5.1
Alabama	4,040,587	4,447,100	4,779,736	5,024,279	332,636	7.5	244,543	5.1
United States	248,709,873	281,421,906	308,745,538	331,449,281	27,323,632	9.7	22,703,743	7.4

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.

Table 7.4 Population by Age Group and Projections

Age Group	2000	2010	2018	2028	2030	2035	2040
0-19	205,052	200,699	192,032	201,798	202,879	207,705	215,616
20-24	43,968	46,087	46,103	48,726	48,961	51,904	53,421
25-29	44,562	45,828	51,866	47,540	47,847	49,233	52,658
30-34	44,902	44,949	46,485	48,493	48,652	50,242	52,082
35-39	51,690	46,127	46,733	47,935	49,749	50,881	53,018
40-44	53,795	47,046	44,522	47,392	46,808	52,038	53,693
45-49	48,368	53,397	47,997	48,789	49,699	48,635	54,498
50-54	43,767	54,779	49,435	48,385	48,485	51,419	50,570
55-59	35,576	49,174	54,005	48,887	49,151	50,051	53,479
60-64	29,904	44,013	51,884	51,088	49,153	50,495	51,817
65+	90,596	106,716	137,857	179,475	187,638	199,367	209,181
20-64 Total	**396,532**	**431,400**	**439,029**	**437,233**	**438,507**	**454,899**	**475,236**
Total Population	**692,180**	**738,815**	**768,917**	**818,507**	**829,024**	**861,971**	**900,033**
Change from 2018							
0-19				5.1%	5.6%	8.2%	12.3%
20-64				-0.4%	-0.1%	3.6%	8.2%
Total Population				6.4%	7.8%	12.1%	17.1%

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.

Educational Attainment

Educational attainment in 2015 to 2019 of Southwest AlabamaWorks residents who were 25 years old and over is shown in Table 7.5 and Figure 7.6. Of these residents, 86.9 percent graduated from high school, which is higher than 86.2 percent for Alabama. Educational attainment of bachelor's or higher degrees was 23.8 percent, lower than the state's 25.5 percent. Baldwin County had higher educational attainment than the other eight counties and even the state, followed by Mobile. Wilcox County had the lowest educational attainment followed by Clarke for high school diplomas, and Choctaw had the lowest for a bachelor's or higher degrees. Educational attainment is important since skills rise with education and high-wage jobs for the 21st century demand more skill sets.

Underemployment and Available Labor

Labor force data are often limited to information on the employed and the unemployed that is available from government sources. However, this information is not complete from the perspective of employers. New or expanding employers are also interested in underemployment because current workers are potential employees. In fact, experience requirements in job ads are evidence that many prospective employers look beyond the unemployed for workers.

Workers in occupations that underutilize their experience, training, and skills are underemployed. These workers might look for other work because their current wages are below what they believe they can earn or because they wish to not be underemployed. Underemployment occurs for various reasons including (i) productivity growth, (ii) spousal employment and income, and (iii) family constraints or personal preferences. Underemployment is unique in different areas because of the various contributing factors combined with each area's economic, social, and geographic characteristics.

The existence of underemployment identifies economic potential that is not being realized. It is extremely difficult

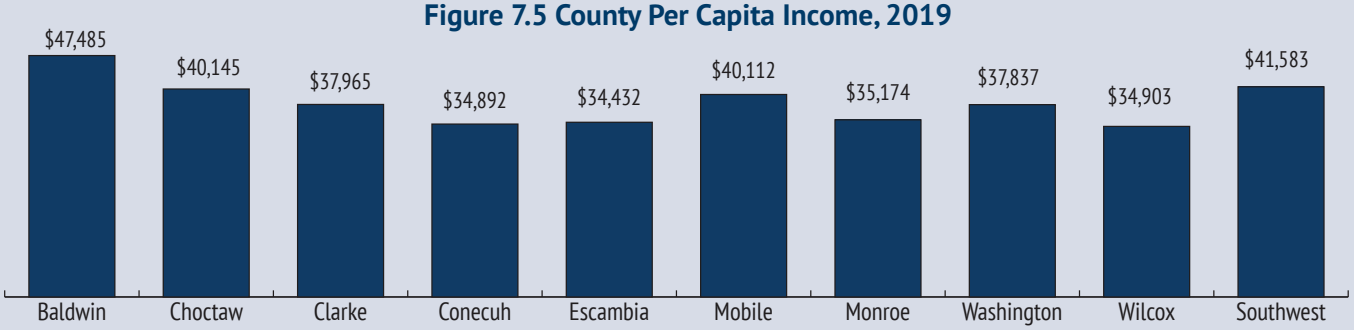
Per Capita Income2

Per capita income (PCI) in Southwest AlabamaWorks was $41,583 in 2019 (Figure 7.4), up 51.1 percent from 2005. Even with this increase, the region's PCI was $2,562, or 5.8 percent, below the state average of $44,145. County PCI are shown in Figure 7.5. Baldwin County had the highest PCI with $47,485, followed by Choctaw at $40,145 and Mobile at $40,112. Escambia County had the lowest PCI with $34,432, followed by Conecuh at $34,892. Of the nine counties in Southwest AlabamaWorks, only Baldwin County had a PCI above the state average.

Figure 7.4 Southwest AlabamaWorks Per Capita Income

Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research, The University of Alabama.

Figure 7.5 County Per Capita Income, 2019



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research, The University of Alabama.

to measure this economic potential because of uncertainties regarding additional income that the underemployed can bring to an area. It is clear, however, that underemployment provides opportunities for selective job creation and economic growth. A business that needs skills prevalent among the underemployed could locate in areas with such workers, regardless of the local unemployment rates. A low unemployment rate, which may falsely suggest limited labor availability, is therefore not a hindrance to the business.

The underemployed present a significant labor pool because they tend to respond to job opportunities that they believe are better for reasons that include (i) higher income, (ii) more benefits, (iii) superior terms and conditions of employment, and (iv) a better match with skills, training, and experience. The underemployed also create opportunities for entry level workers as they leave lower-paying jobs for better-paying ones. Even if their previously held positions are lost or not filled (perhaps due to low unemployment or adverse economic conditions), there is economic growth in gaining higher-paying jobs. Such income growth boosts consumption, savings, and tax collections. Quantifying the size of the underemployed is a necessary first step in considering this group for economic development, workforce training, planning, and other purposes. It is important to note that the underemployed can take on more responsibilities and earn more income, but they cannot be counted on to address possible future worker shortages as they are already employed.

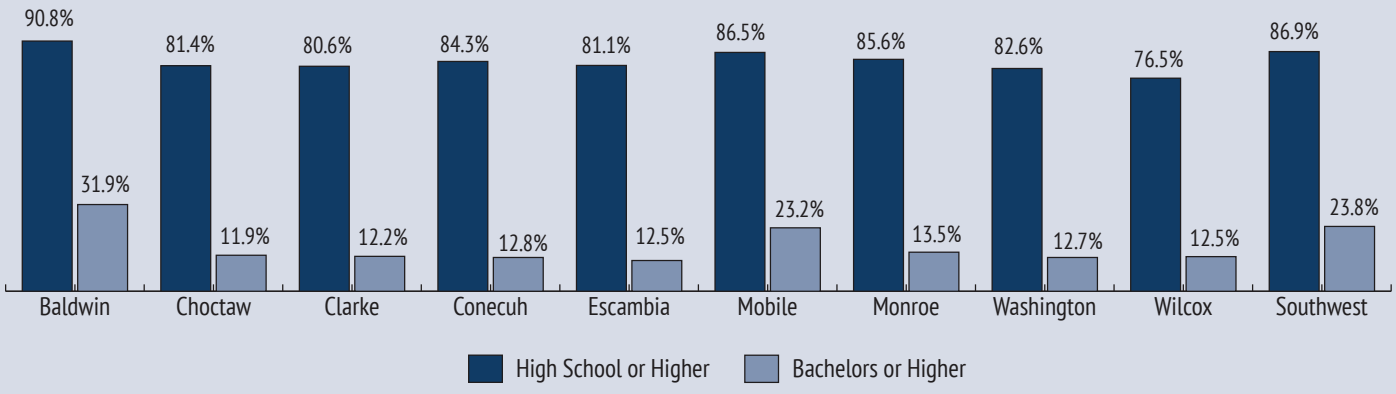
Southwest AlabamaWorks had an underemployment rate of 21.8 percent in 2020/2021. Applying this rate to

Table 7.5 Educational Attainment of Population 25 Years and Over, 2015-2019

	Baldwin	Choctaw	Clarke	Conecuh	Escambia	Mobile	Monroe	Washington	Wilcox	Southwest
Total	151,112	9,329	16,770	8,833	25,859	278,838	14,718	11,346	7,114	523,919
No schooling completed	1,179	117	257	118	242	3,257	150	48	201	5,569
Nursery to 4th grade	347	28	85	46	40	531	23	175	32	1,307
5th and 6th grade	515	91	72	47	101	1,101	63	97	25	2,112
7th and 8th grade	1,426	262	462	159	790	3,817	388	290	145	7,739
9th grade	1,937	347	503	136	815	5,975	363	257	136	10,469
10th grade	3,172	262	731	259	1,405	8,003	530	401	469	15,232
11th grade	2,863	365	693	442	950	10,021	404	501	517	16,756
12th grade, no diploma	2,454	265	456	177	535	5,031	192	202	150	9,462
High school graduate/ equivalent	41,797	3,515	7,005	4,516	11,308	94,715	6,952	4,886	2,808	177,502
Some college, less than 1 year	10,521	652	879	275	1,302	15,271	527	748	441	30,616
Some college, 1+ years, no degree	22,477	1,286	2,236	843	3,240	44,284	1,929	1,333	905	78,533
Associate degree	14,276	1,026	1,341	687	1,907	22,143	1,214	971	396	43,961
Bachelor's degree	31,801	715	1,214	724	2,112	42,982	1,335	800	627	82,310
Master's degree	11,812	321	635	323	916	16,229	535	545	215	31,531
Professional school degree	2,912	40	118	19	115	3,452	98	88	43	6,885
Doctorate degree	1,623	37	83	62	81	2,026	15	4	4	3,935

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau, American Community Survey.

Figure 7.6 Educational Attainment, 2015-2019



Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau, American Community Survey.

March 2021 labor force data means that 68,762 employed residents were underemployed (Table 7.6). Adding the underemployed workers to the unemployed persons gives a total available labor pool of 83,199 for the region, which is 5.8 times the number of unemployed persons and is a more realistic measure of the available labor pool in the region. Prospective employers must be able to offer the underemployed higher wages, better benefits or terms of employment, or some other incentives to entice them to change jobs. County underemployment rates ranged from 15.9 percent for Monroe County to 24.6 percent for Wilcox. Mobile County had the largest available labor pool while Wilcox County had the smallest. More underemployed workers in Southwest AlabamaWorks are willing to commute farther and longer for a better job. For one-way commute, 47.8 percent of the underemployed workers are prepared add 20 or more minutes to their one way commute and 34.0 percent are willing to go 20 or more extra miles for such a job. In contrast, 41.6 percent of all workers are willing to travel for 20 or more minutes and 31.8 percent will go 20 or more extra miles.

Underemployment rates for counties, AlabamaWorks regions, and the state were determined from an extensive survey of the state's workforce. A total of 1,666 complete responses were obtained from Southwest AlabamaWorks in 2020/2021. More than half of the respondents (859) were employed, of whom 187 respondents stated that they were underemployed. The primary reasons for being underemployed in order of popularity are low wages at the available jobs, a lack of job opportunities in their area, other family or personal obligations, living too far from jobs, owning a house in their area, childcare responsibilities, and taking care of someone other than a child. Ongoing economic development efforts can help in this regard. Nonworkers list retirement and disability or other health concerns as the main reasons for their status, but some also cite social security limitations, a lack of job opportunities in their area, and low wages at the available jobs as additional key factors. Such workers may become part of the labor force if these issues can be addressed. Indeed, a recent study found that the flow of labor force nonparticipants to employment status was 60.0 percent more than that of unemployed workers who gained employment. This implies that the available labor pool in Southwest AlabamaWorks could be larger than estimated in this report.

A comparison of underemployed workers to the overall workforce in Southwest AlabamaWorks shows that:

- Fewer work full-time and more of the part-timers would like to work full-time.
- More hold multiple jobs.
- They commute longer times and distances.
- More were laid-off or furloughed from their jobs in the preceding quarter, and fewer have been recalled back to work.
- They have slightly longer job tenure than other employees but earn less.
- More work in computer and mathematical; education,

Table 7.6 Underemployed and Available Labor by County

	Southwest	Baldwin	Choctaw	Clarke	Conecuh	Escambia	Mobile	Monroe	Washington	Wilcox
Labor force	330,295	96,447	4,663	7,677	4,420	14,092	186,411	7,438	6,459	2,688
Employed	315,858	93,539	4,462	7,209	4,213	13,519	177,385	6,993	6,149	2,389
Underemployment rate	21.8%	21.2%	21.8%	22.5%	24.1%	18.6%	22.3%	15.9%	23.9%	24.6%
Underemployed workers	68,762	19,868	975	1,625	1,014	2,510	39,486	1,110	1,468	589
Unemployed	14,437	2,908	201	468	207	573	9,026	445	310	299
Available labor pool	**83,199**	**22,776**	**1,176**	**2,093**	**1,221**	**3,083**	**48,512**	**1,555**	**1,778**	**888**

Note: Rounding errors may be present. Based on March 2021 labor force data and 2020/2021 underemployment rates.
Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Labor.

[3] Canon, M.E., Kudlyak, M., and Reed, M. (2014). Not Everyone Who Joins the Ranks of the Employed was "Unemployed", *The Regional Economist*, January.

training, and library; healthcare practitioners and technical; building and grounds cleaning and maintenance; construction and extraction; installation, maintenance, and repair; production; and transportation and material moving occupations.

- More are in utilities; construction; wholesale trade; retail trade; educational services; health care and social assistance; arts, entertainment, and recreation; and other occupations.
- Fewer believe their jobs fit well with their education and training, skills, and experience.
- More believe they are qualified for a better job based on their education and training and skills.
- More would leave their current jobs for higher income.
- For a better job, more are willing to commute farther and longer.
- Fewer are satisfied with their current jobs.
- More have sought better jobs in the preceding quarter.
- More are willing to train for a better job.
- They are younger; their median age is 52, which is a year below that of all workers.
- Fewer are married and more are female.
- They have lower educational attainment.
- More are African-American or other nonwhite racial groups.

Table 7.7 shows the detailed survey results on job satisfaction and willingness to train. Responses for overall job satisfaction as well as various aspects of the job were obtained. In general, most of the region's workers (80.6 percent) are satisfied or completely satisfied with their jobs. Workers are most satisfied with the work they do and least satisfied with the earnings they receive. Fewer of the underemployed workers are satisfied with their jobs (64.7 percent). The underemployed are most satisfied with their work shift and very dissatisfied with their earnings.

Workers are generally willing to train for a new or better job, with the underemployed being much more willing (66.3 percent vs. 54.6 percent). However, the willingness to train is strongly influenced by who pays for the cost of training. Workers typically do not wish to pay for the training and so their willingness is highest when the cost is fully borne by the government and lowest when the trainee must pay the full costs. Underemployed workers are more willing to train for the new or better job even if they have to bear the full cost of training. The results show that workers expect the government to bear at least a part of the training cost. This expectation may result from worker awareness of government workforce programs that provide such assistance.

Table 7.7 Job Satisfaction and Willingness to Train (Percent)

Job Satisfaction	Completely Dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
Employed					
Overall	2.4	2.9	13.5	25.7	54.9
Earnings	5.4	9.8	22.4	27.1	35.0
Retention	3.4	3.0	9.8	17.0	65.5
Work	0.5	1.3	8.4	23.8	65.7
Hours	2.8	4.4	12.7	18.0	61.8
Shift	2.3	3.1	8.0	17.2	69.2
Conditions	2.7	3.8	11.1	22.1	59.8
Commuting Distance	4.0	4.1	11.5	14.2	65.9
Underemployed					
Overall	7.5	6.4	21.4	24.6	40.1
Earnings	11.8	19.8	30.5	17.7	20.3
Retention	8.0	4.3	21.9	21.9	46.5
Work	1.6	3.8	15.1	26.9	52.2
Hours	7.0	7.0	16.1	21.0	48.9
Shift	5.4	2.7	11.2	19.8	61.0
Conditions	5.4	10.2	18.7	24.1	41.2
Commuting Distance	8.0	7.0	13.9	16.6	54.6

Willingness to Train	Completely Unwilling	Unwilling	Neutral	Willing	Completely Willing
Employed					
For a new or better job	22.1	7.2	15.0	12.1	42.5
If paid by trainee	45.8	18.9	21.0	5.4	7.0
If paid by trainee and government	13.6	11.9	36.2	17.1	17.3
If paid by government	4.7	3.5	10.5	12.2	66.8
Underemployed					
For a new or better job	12.4	4.7	13.6	13.0	53.3
If paid by trainee	43.9	16.2	25.0	4.1	8.8
If paid by trainee and government	9.5	9.5	37.2	16.9	23.7
If paid by government	0.7	1.4	9.5	12.8	71.6

Note: Rounding errors may be present.
Source: Center for Business and Economic Research, The University of Alabama.

WORKFORCE DEMAND

Industry Mix

The health care and social assistance sector was the leading employer in Southwest AlabamaWorks with 40,236 jobs in the first quarter of 2020 (Table 7.8). Rounding out the top five industries by employment are retail trade; accommodation and food services; manufacturing; and educational services. These five industries provided 166,090 jobs or 57.4 percent of the regional total. The average monthly wage across all industries in the region was $4,127; only one of the five leading employers—manufacturing—paid this average wage or more. The highest average monthly wages were for mining at $7,843; utilities at $6,715; finance and insurance at $6,223; manufacturing at $6,131; wholesale trade at $6,094 and information with $5,797. At $1,868, accommodation and food services paid the least average monthly wage. New hire monthly earnings averaged $2,450, which is 59.4 percent of the region's average monthly wage. Mining had the highest average monthly new hire wages with $7,895, followed by manufacturing at $4,091 and professional, scientific, and technical services with $4,063. Accommodation and food services paid newly hired workers the least, at $1,280.

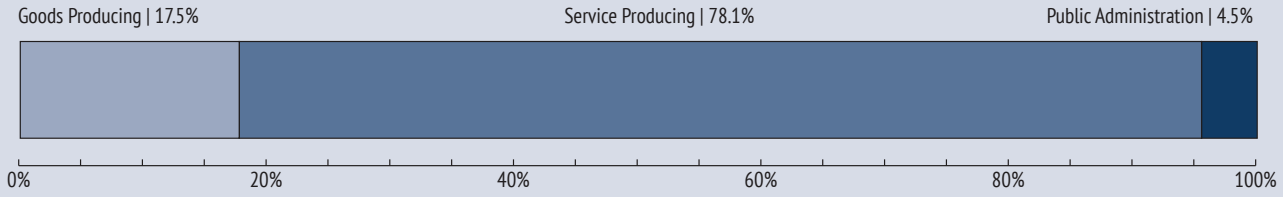
By broad industry classification, service providing industries generated 78.1 percent of jobs in the first quarter of 2020 (Figure 7.7). Goods producing industries were next with 17.5 percent, and public administration accounted for 4.5 percent. The distribution is for all nonagricultural jobs in the region, but there is significant variation by county.

Table 7.8 Industry Mix (First Quarter 2020)

Industry by 2-digit NAICS Code	Total Employment	Share	Rank	Average Monthly Wage	Average Monthly New Hire Earnings
11 Agriculture,Forestry,Fishing and Hunting	2,592	0.90%	18	$3,639	$3,150
21 Mining	664	0.23%	20	$7,843	$7,895
22 Utilities	2,696	0.93%	17	$6,715	$3,360
23 Construction	17,081	5.91%	7	$4,485	$3,389
31-33 Manufacturing	30,128	10.42%	4	$6,131	$4,091
42 Wholesale Trade	11,418	3.95%	10	$6,094	$3,554
44-45 Retail Trade	39,464	13.65%	2	$2,805	$1,617
48-49 Transportation and Warehousing	13,405	4.64%	8	$4,387	$2,953
51 Information	3,128	1.08%	16	$5,797	$3,675
52 Finance and Insurance	8,448	2.92%	12	$6,223	$3,309
53 Real Estate and Rental and Leasing	4,903	1.70%	14	$3,682	$2,742
54 Professional,Scientific,and Technical Services	11,277	3.90%	11	$5,689	$4,063
55 Management of Companies and Enterprises	2,431	0.84%	19	$5,281	$2,732
56 Administrative and Support and Waste Management and Remediation Services	19,718	6.82%	6	$2,803	$2,108
61 Educational Services	25,063	8.67%	5	$3,842	$1,726
62 Health Care and Social Assistance	40,236	13.92%	1	$4,115	$2,764
71 Arts,Entertainment,and Recreation	4,277	1.48%	15	$2,781	$1,406
72 Accommodation and Food Services	31,199	10.79%	3	$1,868	$1,280
81 Other Services (except Public Administration)	8,057	2.79%	13	$3,372	$2,540
92 Public Administration	12,958	4.48%	9	$3,464	$2,487
ALL INDUSTRIES	**289,144**	**100.00%**		**$4,127**	**$2,450**

Note: Rounding errors may be present.
Source: Alabama Department of Labor and U.S. Census Bureau.

Figure 7.7 Southwest AlabamaWorks Employment Distribution (First Quarter 2020)

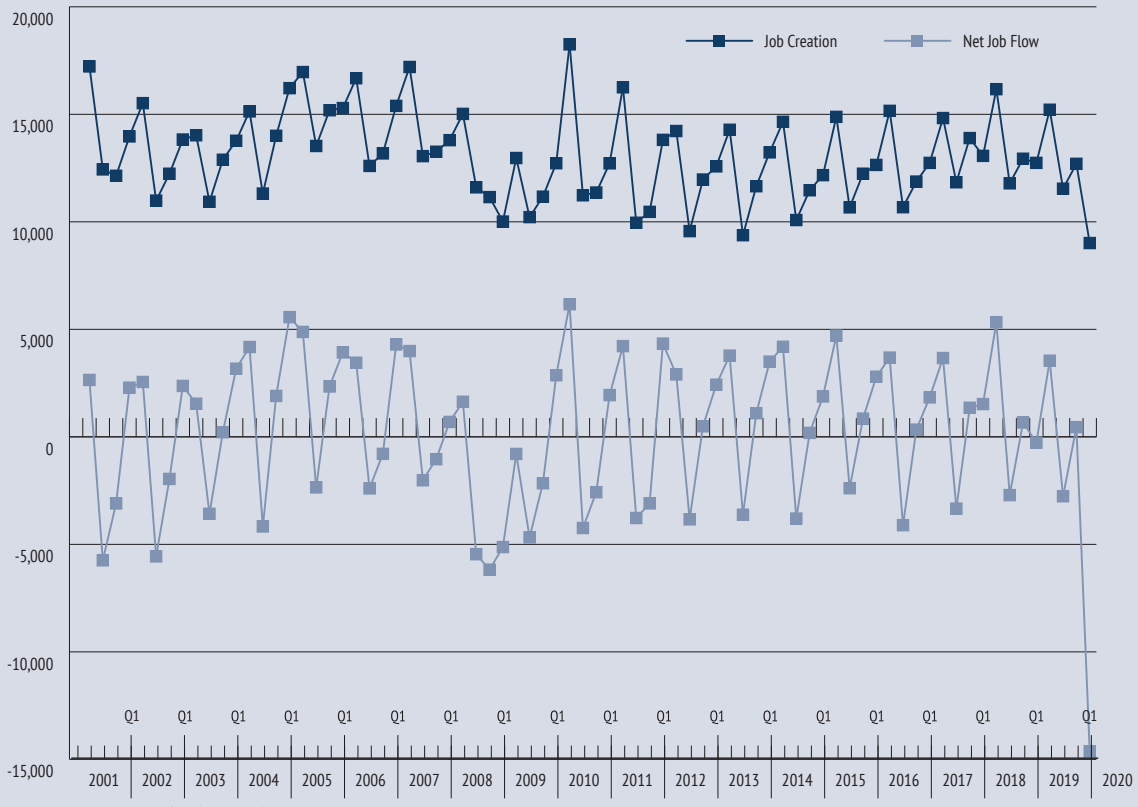


Source: Alabama Department of Labor and U.S. Census Bureau.

Job Creation and Net Job Flows

On average, 13,074 jobs were created per quarter from second quarter 2001 to first quarter 2020 while quarterly net job flows averaged 134 (Figure 7.8). The region's seasonal employment due to tourism is reflected in both the strong fluctuation in quarterly job creation and net job flows. Job creation and net job flows spike and peak in the second quarter when tourism at the Gulf Coast is at its peak and significantly drop in the third quarter. In the fourth quarter of 2019, job creation and net job flows both increased but they drastically declined to record levels in the first quarter of 2020 as the COVID-19 pandemic and recession curtailed the region's tourism industry and general economic activities. The adverse effects of COVID-19 on job flows and creation are expected to be visible in the second and third quarters of 2020 data releases. Quarterly net job flows fluctuate considerably and have ranged from a gain of 6,167 in the second quarter of 2010 to a loss of 14,630 jobs in the first quarter of 2020. Job creation refers to the number of new jobs that are created either by new area businesses or through the expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.

Figure 7.8 Southwest AlabamaWorks Job Creation & Net Job Flows



Source: Alabama Department of Labor and U.S. Census Bureau.

High-Demand, Fast-Growing, High-Earning, and Sharp-Declining Occupations

Southwest AlabamaWorks has 720 single occupations based on 2018 to 2028 occupational projections. Table 7.9 shows the top 40 occupations that are expected to be in high-demand, ranked by projected average annual job openings over the projection period. Many of these occupations are in health care and social assistance, manufacturing, retail trade, accommodation and food services, which are in the five largest employment sectors, identified earlier (Table 7.8). These sectors will continue to dominate employment in the region.

The top five high-demand occupations are Combined Food Preparation and Serving Workers, Including Fast Food; Retail Salespersons; Waiters and Waitresses; Janitors and Cleaners, Except Maids and Housekeeping Cleaners; and Laborers and Freight, Stock, and Material Movers, Hand. Three of the high-demand occupations are also fast-growing. This means that these three occupations have a minimum annual growth rate of 2.17 percent, which is much faster than the regional and state occupational growth rates of 0.53 percent and 0.48 percent, respectively.

The top 20 fastest growing occupations ranked by projected annual percentage growth of employment are listed in Table 7.10. The majority of these occupations are related to the health care and social assistance and manufacturing sectors. The top five fast-growing occupations are Transportation Inspectors; Occupational Therapy Assistants; Engine and Other Machine Assemblers; Aircraft Structure, Surfaces, Rigging, and Systems Assemblers; and Aircraft Mechanics and Service Technicians.

Table 7.11 shows the top 50 highest earning occupations in the region. These occupations are mainly in management, health, and engineering fields and pay a minimum average salary of $89,802 for Civil Engineers and maximum of $273,173 for Surgeons per year. Eight of the top 10 listed are healthcare occupations and two are in management. Any discussion of earnings must consider that wages vary with experience. Occupations with the highest average wages may not necessarily have the highest entry wages.

The top high-earning occupations are generally not fast-growing or in high-demand. Three of the region's occupations are both high-demand and high-earning (Table 7.9 and Table 7.11) and four are both fast-growing and high-earning (Table 7.10 and Table 7.11). Only one occupation--Nurse Practitioners—is in all the three top categories (Table 7.9, Table 7.10 and Table 7.11).

Of the region's 720 occupations, 142 are expected to decline over the 2018 to 2028 period. Employment in the 20 sharpest-declining occupations will fall by at least four percent, with each losing at least 20 jobs (for those with disclosed job openings) over the period (Table 7.12). No efforts should be made to sustain these occupations because they are declining as a result of structural changes in the economy of the region.

Table 7.9 Selected High-Demand Occupations (Base Year 2018 and Projected Year 2028)

Occupation	Average Annual Job Openings		
	Total	Due to Growth	Due to Separations
Combined Food Preparation and Serving Workers, Including Fast Food	1,810	135	1,675
Retail Salespersons	1,770	25	1,745
Waiters and Waitresses	1,245	25	1,220
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	890	45	840
Laborers and Freight, Stock, and Material Movers, Hand	855	50	805
Customer Service Representatives	800	20	775
Heavy and Tractor-Trailer Truck Drivers	700	35	665
First-Line Supervisors of Food Preparation and Serving Workers	490	25	465
Registered Nurses	465	70	395
General and Operations Managers	**465**	**40**	**420**
Personal Care Aides	455	60	395
Cooks, Restaurant	445	50	395
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	435	20	415
Maids and Housekeeping Cleaners	425	15	410
Stock Clerks and Order Fillers	400	15	385
Nursing Assistants	380	20	365
Landscaping and Groundskeeping Workers	360	20	335
Receptionists and Information Clerks	355	20	335
Helpers--Production Workers	335	35	305
Construction Laborers	330	25	300
Maintenance and Repair Workers, General	320	20	300
Electricians	300	25	270
First-Line Supervisors of Construction Trades and Extraction Workers	260	25	240
Accountants and Auditors	230	20	210
Medical Assistants*	225	35	185
Welders, Cutters, Solderers, and Brazers	225	15	215
Carpenters	215	15	200
Industrial Machinery Mechanics	210	20	190
Plumbers, Pipefitters, and Steamfitters	205	20	185
First-Line Supervisors of Production and Operating Workers	200	15	190
Licensed Practical and Licensed Vocational Nurses	185	20	170
Industrial Truck and Tractor Operators	155	20	135
Medical Secretaries	140	15	120
Home Health Aides*	135	25	115
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	120	15	105
Computer User Support Specialists	95	10	85
Taxi Drivers and Chauffeurs	80	15	70
Software Developers, Applications	70	15	55
Industrial Engineers	**70**	**15**	**55**
Nurse Practitioners*	**50**	**15**	**30**

Note: Occupations are growth- and wages weighted and data are rounded to the nearest 5. Occupations in bold are also high-earning.
* Qualify as both high-demand and fast-growing occupations.
Source: Alabama Department of Labor and Center for Business and Economic Research, The University of Alabama.

Table 7.10 Selected Fast-Growing Occupations (Base Year 2018 and Projected Year 2028)

Occupation	Employment		Percent Change	Annual Growth (Percent)
	2018	2028		
Transportation Inspectors	**NA**	**NA**	**75**	**5.76**
Occupational Therapy Assistants	NA	NA	56	4.55
Engine and Other Machine Assemblers	NA	NA	54	4.38
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	NA	NA	51	4.21
Aircraft Mechanics and Service Technicians	210	310	48	3.97
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	150	220	44	3.73
Aerospace Engineering and Operations Technicians	20	30	43	3.68
Physician Assistants	**120**	**160**	**38**	**3.26**
Painters, Transportation Equipment	220	300	37	3.21
Speech-Language Pathologists	210	280	31	2.76
Physical Therapist Assistants	250	330	30	2.63
Information Security Analysts	NA	NA	29	2.59
Floor Layers, Except Carpet, Wood, and Hard Tiles	NA	NA	29	2.58
Nurse Practitioners*	**550**	**710**	**29**	**2.56**
Athletic Trainers	70	90	27	2.40
Phlebotomists	410	520	27	2.39
Aerospace Engineers	**NA**	**NA**	**26**	**2.35**
Radio, Cellular, and Tower Equipment Installers and Repairers	NA	NA	26	2.33
Home Health Aides*	880	1,110	26	2.32
Medical Assistants*	1,520	1,880	24	2.17

Note: Employment data are rounded to the nearest 10 and job openings are rounded to the nearest 5. Occupations in bold are also high-earning.
* Qualify as both high-demand and fast-growing occupations.
Source: Alabama Department of Labor and Center for Business and Economic Research, The University of Alabama.

Table 7.11 Selected High-Earning Occupations (Base Year 2018 and Projected Year 2028)

Occupation	Employment		Annual Growth (Percent)	Average Annual Job Openings	Mean Annual Salary ($)
	2018	2028			
Surgeons	100	100	0.10	5	273,173
Anesthesiologists	NA	NA	0.47	0	271,266
Family and General Practitioners	170	190	1.26	5	266,170
Physicians and Surgeons, All Other	860	950	0.97	35	236,480
Chief Executives	400	380	-0.59	25	178,434
Nurse Anesthetists	190	220	1.74	15	170,576
Architectural and Engineering Managers	280	310	1.10	25	148,970
Dentists, General	210	220	0.66	10	147,054
Podiatrists	NA	NA	1.34	0	145,453
Pharmacists	670	660	-0.16	30	139,906
Industrial Production Managers	460	530	1.40	45	120,035
Petroleum Engineers	30	30	-0.36	0	118,797
Computer Hardware Engineers	NA	NA	0.93	10	117,213
Chemical Engineers	180	210	1.92	15	116,970
Computer and Information Systems Managers	340	370	1.00	30	114,868
Optometrists	90	100	0.75	5	114,738
General and Operations Managers*	4,660	5,070	0.85	465	114,080
Education Administrators, Postsecondary	260	270	0.42	20	113,124
Purchasing Managers	100	120	1.11	10	111,234
Natural Sciences Managers	30	30	0.00	5	110,919
Financial Managers	540	630	1.57	55	110,758
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	60	70	0.62	5	110,089
Aerospace Engineers	**NA**	**NA**	**2.35**	**10**	**109,785**
Human Resources Managers	150	170	0.88	15	108,156
Sales Managers	440	470	0.73	45	107,623
Electrical Engineers	390	420	0.85	30	105,972
Electronics Engineers, Except Computer	NA	NA	0.94	15	105,796
Business Teachers, Postsecondary	80	90	1.52	10	105,258
Computer Programmers	870	790	-1.03	50	103,809
Transportation, Storage, and Distribution Managers	160	190	1.71	15	100,504
Lawyers	1,240	1,330	0.68	70	100,463
Management Analysts	630	720	1.35	70	99,653
Construction Managers	740	810	0.88	65	99,651
Industrial Engineers*	750	890	1.69	70	99,193
Health Specialties Teachers, Postsecondary	200	250	1.98	20	98,426
Mechanical Engineers	480	540	1.25	40	97,499
Marketing Managers	100	110	0.90	10	96,985
Emergency Management Directors	30	30	0.32	5	96,664
Nurse Practitioners*	**550**	**710**	**2.56**	**50**	**96,017**
Veterinarians	190	230	1.67	10	95,304
Computer Network Architects	NA	NA	0.94	10	94,850
Physical Therapists	440	530	1.76	30	94,443

Table 7.11 Selected High-Earning Occupations (Base Year 2018 and Projected Year 2028) Continued

Physician Assistants	**120**	**160**	**3.26**	**10**	**94,169**
Administrative Services Managers	110	120	0.62	10	93,002
Medical and Health Services Managers	520	600	1.37	50	92,982
Training and Development Managers	NA	NA	0.65	0	92,538
Power Distributors and Dispatchers	NA	NA	-0.36	5	92,343
Transportation Inspectors	**NA**	**NA**	**5.76**	**10**	**92,171**
Atmospheric and Space Scientists	30	30	0.00	5	90,901
Civil Engineers	850	900	0.57	75	89,802

Note: Employment and salaries data are rounded to the nearest 10; job openings to the nearest 5. The salary data provided are based on the May 2019 release of the Occupational Employment Statistics (OES) combined employment and wage file. Estimates for specific occupations may include imputed data.
* Qualify as both high-earning and high-demand occupations. NA – Not available due to disclosure limitations.
Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Labor.

Table 7.12 Selected Sharp-Declining Occupations (Base Year 2018 and Projected Year 2028)

Occupation	Employment		Net Change	Percent Change
	2018	2028		
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	8,850	8,180	-670	-8
Office Clerks, General	5,330	5,120	-210	-4
Bookkeeping, Accounting, and Auditing Clerks	4,150	4,000	-150	-4
Tellers	1,300	1,170	-130	-10
Cooks, Fast Food	830	740	-90	-11
Executive Secretaries and Executive Administrative Assistants	480	390	-90	-20
Paper Goods Machine Setters, Operators, and Tenders	1,530	1,440	-90	-6
Computer Programmers	870	790	-80	-10
Legal Secretaries	490	410	-80	-18
Telecommunications Equipment Installers and Repairers, Except Line Installers	960	880	-80	-8
Postal Service Mail Carriers	720	650	-70	-10
Correctional Officers and Jailers	780	720	-60	-7
Switchboard Operators, Including Answering Service	240	180	-60	-24
Inspectors, Testers, Sorters, Samplers, and Weighers	1,200	1,140	-60	-5
Data Entry Keyers	200	160	-40	-21
Pressers, Textile, Garment, and Related Materials	220	180	-40	-18
Advertising Sales Agents	220	190	-30	-12
Floral Designers	160	140	-20	-16
Word Processors and Typists	50	30	-20	-35
Reporters and Correspondents	NA	NA	NA	-23

Note: Employment data are rounded to the nearest 10.
Source: Alabama Department of Labor and Center for Business and Economic Research, The University of Alabama.

Skills and Skills Gap Analyses

Jobs require skill sets and it is necessary that jobholders have the relevant skills. Table 7.13 shows skill types and definitions as provided by O*NET Online, which offers skill sets for all occupations ranked by the degree of importance. High-earning occupations typically require skills that are obtained in pursuit of the higher education that such jobs typically require. Lower earning occupations require more basic skill sets. Some occupations have no minimum skill set requirements (e.g., dishwashers and maids).

Table 7.14 shows the percentage of selected occupations in the region that list a particular skill as primary. We define primary skills as the 10 most important skills in the required skill set for an occupation. It is important to note that a particular skill may be more important and more extensively used in one occupation than another. Table 7.14 does not address such cross-occupational skill importance comparisons. In general, basic skills are most frequently listed as primary, which means that they are important for practically all jobs.

High-earning occupations in Southwest AlabamaWorks require more active learning, active listening, critical thinking, learning strategies, mathematics, reading comprehension, science, speaking, writing, complex problem solving, management of personnel and financial resources, negotiation, judgment and decision making, system analysis, system evaluation, and operations analysis skills than are required for most of the high-demand or fast-growing jobs. Many of these skills require long training periods and postsecondary education. However, high-earning jobs require significantly fewer technical skills. High-demand occupations require more social and resource management skills than fast-growing occupations. Fast-growing occupations in general require more basic, complex problem solving, and technical skills than high-demand occupations.

Table 7.15 shows skill gap indexes for all 35 skills in Table 7.13 based on the projection period (2018 to 2028). By definition, skills gap indexes range from 0 to 100 and are standardized measures of the difference between current supply and projected demand. The index does not provide any information about current or base year skill supply. It focuses on the projection period and identifies critical skill needs. The index essentially ranks expected training needs and indicates the need to increase the scale of training. The higher the index the more critical the skill over the specified projection period and a higher skill gap index indicates the need to increase the scale of training.

For policy and planning purposes, skill gap indexes have to be considered together with replacement indexes, which illustrate the expected share of job openings due to replacement. Replacement is necessary because of turnover and people leaving the labor force. The smaller the replacement index, the larger the share of job openings due to growth, which in turn implies a need to increase the pace of skill training. Skill gap indexes demonstrate the need to ramp up the scale of skill training while replacement indexes address the pace of training.

By skill type, the skill gap indexes show that basic skills are most critical followed by social, complex problem solving, systems, resource management, and technical skills. The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs indicates a strong need for training in these skills. The pace of training needs to increase for technical, basic (science), and resource management skills. The scale of training should be raised for basic and social skills as well.

Table 7.13 Skill Types and Definitions

Basic Skills: Developed capacities that facilitate learning or the more rapid acquisition of knowledge.

- Active Learning – Understanding the implications of new information for both current and future problem-solving and decision-making.
- Active Listening – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- Learning Strategies – Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- Mathematics – Using mathematics to solve problems.
- Monitoring – Monitoring / Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- Reading Comprehension – Understanding written sentences and paragraphs in work-related documents.
- Science – Using scientific rules and methods to solve problems.
- Speaking – Talking to others to convey information effectively.
- Writing – Communicating effectively in writing as appropriate for the needs of the audience.

Complex Problem Solving Skills: Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.

- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Resource Management Skills: Developed capacities used to allocate resources efficiently.

- Management of Financial Resources – Determining how money will be spent to get the work done and accounting for these expenditures.
- Management of Material Resources – Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
- Management of Personnel Resources – Motivating, developing, and directing people as they work, identifying the best people for the job.
- Time Management – Managing one's own time and the time of others.

Social Skills: Developed capacities used to work with people to achieve goals.

- Coordination – Adjusting actions in relation to others' actions.
- Instructing – Teaching others how to do something.
- Negotiation – Bringing others together and trying to reconcile differences.
- Persuasion – Persuading others to change their minds or behavior.
- Service Orientation – Actively looking for ways to help people.
- Social Perceptiveness – Being aware of others' reactions and understanding why they react as they do.

Systems Skills: Developed capacities used to understand, monitor, and improve socio-technical systems.

- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Systems Analysis – Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Systems Evaluation – Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

Technical Skills: Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems.

- Equipment Maintenance – Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Equipment Selection – Determining the kind of tools and equipment needed to do a job.
- Installation – Installing equipment, machines, wiring, or programs to meet specifications.
- Operation and Control – Controlling operations of equipment or systems.
- Operation Monitoring – Watching gauges, dials, or other indicators to make sure a machine is working properly.
- Operations Analysis – Analyzing needs and product requirements to create a design.
- Programming – Writing computer programs for various purposes.
- Quality Control Analysis – Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Repairing – Repairing machines or systems using the needed tools.
- Technology Design – Generating or adapting equipment and technology to serve user needs.
- Troubleshooting – Determining causes of operating errors and deciding what to do about it.

Source: O*NET Online (http://online.onetcenter.org/skills/).

Table 7.14 Percentage of Selected Occupations for Which Skill Is Primary

	Selected High-Demand Occupations	Selected Fast-Growing Occupations	Selected High-Earning Occupations
Basic Skills			
Active Learning	28	40	58
Active Listening	68	80	88
Critical Thinking	60	80	88
Learning Strategies	0	5	6
Mathematics	3	5	14
Monitoring	50	80	52
Reading Comprehension	45	75	88
Science	3	10	28
Speaking	63	80	84
Writing	18	40	58
Complex Problem Solving Skills			
Complex Problem Solving	25	40	72
Resource Management Skills			
Management of Financial Resources	0	0	2
Management of Material Resources	0	0	0
Management of Personnel Resources	8	0	14
Time Management	33	15	22
Social Skills			
Coordination	45	25	26
Instructing	13	10	10
Negotiation	8	0	12
Persuasion	10	5	8
Service Orientation	38	35	16
Social Perceptiveness	45	45	34
Systems Skills			
Judgment and Decision Making	23	45	74
Systems Analysis	8	5	16
Systems Evaluation	3	0	10
Technical Skills			
Equipment Maintenance	10	15	0
Equipment Selection	5	0	0
Installation	3	5	0
Operation and Control	18	10	2
Operation Monitoring	15	20	2
Operations Analysis	3	5	12
Programming	3	0	2
Quality Control Analysis	3	25	2
Repairing	8	10	0
Technology Design	0	0	0
Troubleshooting	10	15	0

Note: Rounding errors may be present.
Source: O*NET Online and Center for Business and Economic Research, The University of Alabama

Education and Training Issues

Educational attainment in Southwest AlabamaWorks is above that of the state for graduates with a high school diploma or higher but is lower for those with a bachelor's degree or higher. Almost 87 percent of residents age 25 and over graduated from high school from 2015 to 2019, compared to 86 percent for the state. About 24 percent of the population had a bachelor's or higher degree versus 26 percent for Alabama. Skill and education requirements for jobs keep rising. This highlights a strong need to raise educational attainment in the region as only Baldwin County has higher educational attainment than the state.

Table 7.16 shows the number of selected occupations in the region for which a particular education/training category is most common. In general, high-earning occupations require high educational attainment levels; only three high-earning occupations do not require a bachelor's or higher degree. Six (15.0 percent) of the top 40 high-demand occupations have a bachelor's or higher degree. Ten (50.0 percent) of the top 20 fast-growing occupations require an associate's degree at the minimum, with six (30.0 percent) requiring a bachelor's or higher degree.

The 2018 to 2028 occupational projections indicate that future jobs will require postsecondary education and training at a minimum. Currently job ads increasingly require at least a high school diploma or GED. Of the region's 720 occupations and occupational categories, 142 are expected to decline over the period. Employment in the top 20 sharpest-declining occupations will drop by a minimum of 20 jobs each (for those with disclosed net change) and at least four percent over the period. Education and training for these should slow accordingly.

Table 7.15 Skills Gap Indexes (Base Year 2018 and Projected Year 2028)

Skill	Skill Type	Total Openings (Projected Demand)	Skills Gap Index	Replacement Index
Active Listening	Basic	31,475	78	95
Speaking	Basic	30,940	77	95
Monitoring	Basic	26,425	66	94
Critical Thinking	Basic	24,325	60	94
Social Perceptiveness	Social	24,150	60	95
Coordination	Social	24,145	60	94
Service Orientation	Social	24,060	60	95
Time Management	Resource	22,305	55	95
Reading Comprehension	Basic	21,580	54	95
Judgment and Decision Making	Systems	15,605	39	93
Writing	Basic	15,520	39	95
Active Learning	Basic	15,210	38	93
Complex Problem Solving	Complex	13,310	33	92
Persuasion	Social	11,075	28	94
Instructing	Social	9,520	24	91
Negotiation	Social	9,020	23	95
Learning Strategies	Basic	8,265	21	92
Operation Monitoring	Technical	6,700	17	93
Operation and Control	Technical	6,285	16	94
Systems Analysis	Systems	6,100	16	92
Systems Evaluation	Systems	5,680	14	91
Mathematics	Basic	5,655	14	95
Management of Personnel Resources	Resource	5,530	14	93
Quality Control Analysis	Technical	5,080	13	93
Troubleshooting	Technical	3,785	10	93
Equipment Maintenance	Technical	2,555	7	92
Repairing	Technical	2,160	6	91
Management of Financial Resources	Resource	1,605	4	92
Equipment Selection	Technical	1,345	4	91
Management of Material Resources	Resource	1,285	4	91
Operations Analysis	Technical	1,045	3	88
Installation	Technical	845	3	93
Science	Basic	615	2	80
Programming	Technical	230	1	91
Technology Design	Technical	165	1	85

Note: These are annualized skills indexes based on 2018 to 2028 occupation projections.
Source: Center for Business and Economic Research, The University of Alabama, Alabama Department of Labor, and O*Net Online

Table 7.16 Number of Selected Occupations by Education/Training Requirement

Most Common Education/Training Requirements Categories	Selected High-Demand Occupations	Selected Fast-Growing Occupations	Selected High-Earning Occupations
Doctoral Degree or First Professional Degree	0	0	13
Master's Degree	1	3	4
Bachelor's Degree	5	3	30
Associate Degree	0	4	0
Postsecondary Non-Degree	5	3	0
Some College, no Degree	1	0	0
High School Diploma or Equivalent	17	6	3
No Formal Educational Credential	11	1	0

Source: O*NET Online; Center for Business and Economic Research, The University of Alabama; and Alabama Department of Labor.

IMPLICATIONS AND RECOMMENDATIONS

Employment growth in Southwest AlabamaWorks is expected to be greater than labor force growth leading to worker shortfalls. From a 2018 base, worker shortfalls of about 36,500 and 44,900 for 2028 and 2030 respectively are expected (Table 7.17). By 2040, the worker shortfall is expected to be about 54,800 workers. Worker skills and shortfalls must be a priority for the region through 2040. Worker shortfalls for critical occupations will need to be continuously addressed.

Since employment is critical to economic development, strategies to address potential shortfalls must be adopted and implemented. Such strategies should aim at increasing labor force participation, encouraging in-migration, and raising worker productivity. Efforts to address the need for higher labor force participation, higher productivity, and faster labor force growth to meet workforce demand must include: (1) improving education and its funding; (2) introducing economic opportunities that attract new and younger residents; (3) lowering the high school dropout rate; (4) focusing on hard-to-serve populations (e.g., out-of-school youth); (5) continuing and enhancing programs to assess, retrain, and place dislocated workers; (6) encouraging older worker participation in the labor force; and (7) facilitating in-commuting.

Table 7.17 Expected Worker Shortfallt

	2018-2028	2018-2030	2018-2035	2018-2040
Total population growth (percent)	6.4	7.8	12.1	17.1
Age 20-64 growth (percent)	-0.4	-0.1	3.6	8.2
Job growth (percent)	11.5	14.6	20.0	26.2
Worker shortfall (percent)	11.9	14.7	16.4	17.9
Worker shortfall (number)	36,510	44,925	50,091	54,796

Improving education is vital because a highly educated and productive workforce is a critical economic development asset. The educational and training requirements of high-demand, fast-growing, and high-earning occupations show the significance of education in developing the future workforce. The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs in particular demonstrates a strong need for training in these skills. The pace of training needs to increase for technical, basic (science), and resource management skills, while the scale of training should be raised for basic and social skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skills while enhancing these basic skills. Employers should be an integral part of planning for training as they can help identify future skill needs and any existing gaps. Education and training for the 20 sharp-declining occupations in Table 7.12 should slow accordingly.

Another very important reason to improve education is that more educated people are more likely to work; data on worker participation and educational attainment show that labor force participation increases with worker education. Productivity also rises with education, which yields high private and social returns. Workforce development must view all types of education and other programs (e.g., adult education, career technical training, worker retraining, career readiness, etc.) as one system. Funding to support workforce development may require tax reform at state and local levels and must provide for flexibility as workforce needs change over time and demand different priorities.

Programs to assess, retrain, and place dislocated workers—especially those affected by outsourcing and structural changes in the economy—should be continued and enhanced because they can improve the labor force participation rate. Hard-to-serve populations include persons in poverty, those receiving welfare, residents of sparsely populated areas, and those on active parole. These populations are often outside of the mainstream economy and are in poverty. They usually have difficulty finding work because they have low levels of educational attainment, lack occupational skills, or face geographic or other barriers. They are a potential human resource, but investment in training, transportation, childcare, infrastructure, etc. may be needed to tap this resource.

In-migration is one way of growing the labor force as it helps population growth. The region's population growth

rate is currently higher than the state but the working age group is expected to decline through 2030. This might hinder the region's ability to meet the expected job demand barring future economic slowdowns. Higher employment demand could be partially served by in-commuting. However, new residents can be attracted using higher-paying job opportunities from the region's economic development successes. Investment in amenities and infrastructure may be needed to support such growth. In-migration is generally more beneficial to a region than in-commuting since it grows the economy faster and adds to the tax base.

Policies that facilitate and encourage older worker participation are needed as older workers can help meet the region's workforce challenge. Such policies can be related to income taxation, job flexibility, and retirement programs. As the share of older people in the population is projected to increase, it becomes even more important that they be active in the workforce. Older worker participation has been rising nationally since the early 1990s. This has been attributed to reasons including:

- Older workers can work longer because they are healthier.
- The number of physically demanding jobs is falling.
- Defined contribution plans are replacing pensions.
- There are fewer employer-paid retiree health insurance programs.
- Social security reforms affecting those born after 1938 (i) gradually raise the normal retirement age from 65 to 67, (ii) increase the rate at which monthly payments rise with delayed benefits, and (iii) eliminate the reduction in benefits for those working beyond the full retirement age.

Diversifying the region's economy will strengthen it. This demands that economic development also focus on retaining, expanding, and attracting businesses that provide more high-earning jobs. Current workers—including the underemployed—would welcome higher-earning opportunities. An economic development focus on diversification would require that workforce development policies pay attention to postsecondary and higher educational systems to ensure a ready and available workforce for new and expanding businesses. The higher incomes earned by graduates of these institutions would help raise personal income for the region and provide additional local (county and city) tax revenue. Raising personal income by improving educational attainment and technological skills for a region that has low labor force growth rates is an effective economic development strategy. Together, workforce development and economic development can build a strong, well-diversified economy. Indeed, we cannot achieve success in one without the other.

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